

**AMENDED CLAIM SET:**

1. – 32. (cancelled).

33. (currently amended) A method for *in vivo* analysis of the toxicity of a chemical, physical, or biological agent, which method comprises the steps of:

(a) exposing a transgenic mouse ~~animal~~, comprising cells containing a construct of a stress-sensitive regulatory sequence functionally linked to a reporter-gene sequence, to the agent;

(b) measuring expression of a reporter gene in said transgenic animal;  
and

(c) relating said expression to an effect of said agent.

34. (cancelled).

35. (cancelled).

36. (previously presented) A method for analysis of a chemical, physical, or biological toxic agent, which method comprises the steps of:

(a) exposing a transgenic rodent, comprising cells containing a construct of a heat shock protein promoter sequence functionally linked to a reporter-gene sequence selected from the group consisting of a growth hormone gene

sequence, a chloramphenicol acetyl transferase gene sequence, and a green fluorescence protein gene sequence, to the toxic agent;

(b) measuring expression of the reporter gene; and

(c) relating said expression to an effect of said toxic agent.

37. (previously presented) The method of claim 36, wherein said rodent is a mouse and said reporter-gene sequence is a growth hormone gene sequence.

38. (previously presented) A method for *in vivo* analysis of the toxicity of a toxic metal, which method comprises the steps of:

(a) exposing a transgenic mouse, comprising cells containing a construct of a heat shock promoter sequence functionally linked to a growth hormone gene sequence, to the metal;

(b) measuring the increase of growth hormone plasma concentration in said transgenic mouse; and

(c) comparing said increase in growth hormone concentration to a control growth hormone concentration.

39. (previously presented) The method of claim 38, wherein the toxic metal is arsenic or mercury.

40. (currently amended) The method of claim 41 [[24]], wherein a hsp70/HGH mouse is used for repeated tests with arsenic.

41. (new) A method for analysis of a chemical, physical, or biological toxic agent, which method comprises the steps of:

(a) exposing a non-human transgenic animal, comprising cells containing a construct of a stress-sensitive regulatory sequence functionally linked to a reporter-gene sequence, to the toxic agent;

(b) measuring expression of the reporter gene;

(c) relating said expression to an effect of said toxic agent; and

(d) using said animal for repeated tests with the same toxic agent or with a different toxic agent.

42. (new) The method of claim 41, wherein said analysis is of toxicity kinetics of one or more toxic agents.

43. (new) The method of claim 41, wherein said analysis is of heat stress.

44. (new) The method of claim 41, wherein said analysis is of metal toxicity.

45. (new) The method of claim 41, wherein the metal is selected from the group consisting of Rb, Cr, Cu, Hg, As, and Cd.